

## EAST Search History

### EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	59	(rais\$4 SAME (brush or (sand NEAR2 paper))) and (artificial NEAR5 leather) and fabric	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/12/08 17:43
L2	35	(rais\$4 SAME (brush or (sand NEAR2 paper))) and ((artificial NEAR5 leather) SAME (nonwoven or (non adj woven)) SAME fabric)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/12/08 17:52
L3	6	((TOMOYUKI) near2 (HORIGUCHI)).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/12/08 18:27
L4	2	((KYOKO) near2 (YOKOI)).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/12/08 18:27
L5	7	L3 or L4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/12/08 18:27
L6	7	L5 and (nonwoven or (non adj woven)) and (fiber or fibre) and (density or strength or modulus)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/12/08 18:28
L7	1	L6 and (needle NEAR2 punch\$3) and (hydro adj entangl\$5)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/12/08 18:29
S1	4	"6,566,287"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2008/09/29 18:45

S2	8	"5,256,429"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2008/09/29 19:32
S3	3	"6,537,660"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2008/09/29 19:36
S4	6601	island NEAR5 sea	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/09/29 20:16
S5	39005	fine NEAR5 fiber	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/09/29 20:16
S6	1070	S4 and S5	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/09/29 20:16
S7	2471	remove NEAR10 sea	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/09/29 20:17
S8	132	S7 and S4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/09/29 20:17
S9	65	S8 and S6	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/09/29 20:17

S10	6601	island NEAR5 sea	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/09/30 13:11
S11	39010	fine NEAR5 fiber	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/09/30 13:11
S12	1070	S10 and S11	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/09/30 13:11
S13	2472	remove NEAR10 sea	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/09/30 13:11
S14	132	S13 and S10	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/09/30 13:11
S15	34	S14 and S12 and (needle NEAR5 punch \$5)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/09/30 13:11
S16	24	S15 and (entangl\$5)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/09/30 13:11
S17	72239	(hydro NEAR3 entangl \$7) or (jet NEAR6 punch\$5) or (jet\$5 NEAR2 water)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/09/30 13:48

S18	2246	(hydro NEAR3 entangl\$7) or (jet NEAR6 punch\$5)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/09/30 13:48
S19	680	S18 and (needle NEAR5 punch\$5)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/09/30 13:49
S20	103	S19 and S10	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/09/30 13:49
S21	13704	(sea NEAR10 (remov\$3 or decompos\$5 or extract\$5 or eliminat\$5 or eradication\$5 or ablat\$5 or withdraw\$5))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/09/30 13:53
S22	725	S21 and S10	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/09/30 13:53
S23	47	S22 and S20	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/09/30 13:54
S24	9207	(hydro NEAR3 entangl\$7) or (jet NEAR6 punch\$5) or (jet NEAR3 impact\$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/09/30 13:55
S25	15630	(sea NEAR10 (remov\$3 or decompos\$5 or dissolv\$5 or extract\$5 or eliminat\$5 or eradication\$5 or ablat\$5 or withdraw\$5))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/09/30 14:48

S26	954	S25 and S10	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/09/30 14:53
S27	67	S26 and S24	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/09/30 14:54
S28	5037	(high adj pressure) NEAR3 (water adj jet)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/10/02 11:18
S29	2131	S28 and diameter	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/10/02 11:18
S30	145	S28 WITH diameter	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/10/02 11:18
S31	54	S30 and fiber	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/10/02 11:19
S32	3	(polyethylene adj terephthalate) WITH (ethyl adj hexylacrylate)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/10/02 16:10
S33	78	(polyethylene adj terephthalate) and (ethyl adj hexylacrylate)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/10/02 16:11

S34	1	S33 and (island WITH sea)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/10/02 16:12
S35	3	S33 and (denier or decitex)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/10/02 16:12
S36	93	((polyethylene adj terephthalate) or PET) and (ethyl adj hexylacrylate)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/10/02 16:14
S37	1	S36 and (island WITH sea)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/10/02 16:15
S38	5	S36 AND (denier or decitex)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/10/02 16:15
S39	18	(polyethylene adj terephthalate) WITH (ethyl adj hexyl adj acrylate)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/10/02 16:17
S40	1	S39 and (island WITH sea)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/10/02 16:17
S41	1	S39 and (denier or decitex)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/10/02 16:17

S42	1480	(polyethylene adj terephthalate) and (island WITH sea)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/10/02 16:19
S43	834	S42 and (denier or decitex or dtex)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/10/02 16:19
S44	271	S43 and (needle adj punch\$5)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/10/02 16:20
S45	2	"20020013111"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/05/02 19:15
S46	0	(fabric or fiber or fibre or fibril or fibrid or filament or yarn) SAME length SAME (fine or fineness or finely or ultra-fine) SAME (entangle\$3) SAME strength SAME density SAME ((weight NEAR2 area) or (mass NEAR2 area)) SAME (denier or decitex or (N/tex) or dtex)	US-PGPUB; USPAT; USOCR	OR	ON	2009/05/07 18:11
S47	0	(fabric or fiber or fibre or fibril or fibrid or filament or yarn) SAME length SAME (fine or fineness or finely or ultra-fine) SAME (entangle\$3) SAME strength SAME density SAME ((weight NEAR2 area) or (mass NEAR2 area)) SAME (denier or decitex or (N/tex) or dtex) SAME (staple or wool or	US-PGPUB; USPAT; USOCR	OR	ON	2009/05/07 18:11

		(short NEAR2 (fiber or fibre or filament or fibril)))				
S48	1323	(fabric or fiber or fibre or fibril or fibril or filament or yarn) and length and (fine or fineness or finely or ultra-fine) and (entangle\$3) and strength and density and (denier or decitex or (N/tex) or dtex) and (staple or wool or (short NEAR2 (fiber or fibre or filament or fibril)))	US-PGPUB; USPAT; USOCR	OR	ON	2009/05/07 18:13
S49	1233	S48 and (polyester or polyamide)	US-PGPUB; USPAT; USOCR	OR	ON	2009/05/07 18:13
S50	1268	S48 and (polyester or polyamide or terephthalate or nylon)	US-PGPUB; USPAT; USOCR	OR	ON	2009/05/07 18:16
S51	1268	S48 and (polyester or polyamide or terephthalate or nylon or (polyethylene NEAR2 naphthalane NEAR2 dicarboxylate) or (polyethylene NEAR4 chlorophenoxy NEAR4 ethane NEAR4 dicarboxylate))	US-PGPUB; USPAT; USOCR	OR	ON	2009/05/07 18:19
S52	66	S51 and (island NEAR2 sea) and (needle NEAR2 punch \$3) and (hydroentangl \$6 or (water NEAR3 pressure) or (sharp\$3 NEAR2 water) or (hydro NEAR2 entangl \$6))	US-PGPUB; USPAT; USOCR	OR	ON	2009/05/07 18:36

S53	5939	428/327 or 442/51 or 442/60 or 442/333 or 442/334 or 442/357 or 442/359 or 442/360 or 442/363 or 442/383 or 442/384 or 442/387 or 442/368 or 442/402 or 442/408 or 442/4 or 28/103 or 28/112 or 264/171.2	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/05/09 21:37
S54	19860	(artificial or synthetic) NEAR2 leather	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/05/09 21:38
S55	102	S53 and S54	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/05/09 21:38
S56	89	S55 and (nonwoven or non-woven or (non adj woven))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/05/09 21:38
S57	89	S56 and (staple or biocomponent or wool or polyester or polyamide or terephthalate or nylon or (polyethylene NEAR2 naphthalane NEAR2 dicarboxylate) or (polyethylene NEAR4 chlorophenoxy NEAR4 ethane NEAR4 dicarboxylate))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/05/09 21:40
S58	71	S57 and (denier or decitex or dtex)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/05/09 21:41

S59	50	S58 and density	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/05/09 21:41
S60	18	S58 and density and ((weight NEAR4 area) or (mass NEAR4 area))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/05/09 21:48
S61	2	"5,888,916".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/05/09 22:13
S62	1	10/564789	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/12/14 13:00
S63	207	(nonwoven or (non adj woven)) and ((ultra adj fine) NEAR5 (fiber or fibre or filament or fibril)) and entangl\$7	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/12/14 13:46
S64	156	S63 NOT elastomer	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/12/14 13:47
S65	110	S64 NOT bundl\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/12/14 13:47
S66	55	S65 and staple	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/12/14 13:48

S67	113	S63 NOT (elastomer or polyurethane)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/12/14 13:50
S68	92	S67 NOT bundl\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/12/14 13:50
S69	42	S68 and staple	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/12/14 13:50
S70	1	S69 and (weight NEAR3 area)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/12/14 13:50
S71	35	S69 and density	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/12/14 13:53
S72	9	S71 and (dtex or decitex or denier)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/12/14 13:57
S73	12	(nonwoven or (non adj woven)) and ((ultra adj fine) NEAR5 (fiber or fibre or filament or fibril)) and entangl\$7 and length and staple and weight and (apparent adj density) and strength	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/12/14 14:20

S75	35	(battery adj separator) and ((non adj woven) NEAR10 fabric) and (fibre or fiber or fibril or filament) and (needle adj punching)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/12/14 17:44
S76	1	(battery adj separator) and ((non adj woven) NEAR10 fabric) and (fibre or fiber or fibril or filament) and (needle adj punch\$5) and (punching adj density)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/12/14 19:12
S77	1	(battery adj separator) and ((non adj woven)) and (fibre or fiber or fibril or filament) and (needle adj punch\$5) and (punching adj density)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/12/14 19:28
S78	2	(battery adj separator) and ((non adj woven)) and (fibre or fiber or fibril or filament) and (needle adj punch\$5) and (punch\$5 adj density)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/12/14 19:28
S79	145	((non adj woven)) and (fibre or fiber or fibril or filament) and (needle adj punch\$5) and (punch\$5 adj density)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/12/14 19:50
S80	18	((non adj woven)) and (fibre or fiber or fibril or filament) and (needle adj punch\$5) and (punch\$5 adj density) and (island NEAR3 sea)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/12/14 19:51
S81	8	((non adj woven)) and (fibre or fiber or fibril or filament) and (needle adj punch\$5) and (punch\$5 adj density) and (island NEAR3 sea) and ((water adj jet) or hydroentangl\$5)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/12/15 11:25

S82	149	((non adj woven)) and raised and (battery adj separator)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/12/15 12:14
S83	10	((non adj woven)) and (raised NEAR5 surface) and (battery adj separator)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/12/15 12:14
S84	10	((non adj woven) NEAR3 fabric) and (raised NEAR15 surface) and (battery adj separator)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/12/15 12:15
S85	43091	tensile adj strength and fabric	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/12/06 13:02
S86	7592	(tensile adj strength) NEAR10 fabric	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/12/06 13:02
S87	12	S86 and 428/327	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/12/06 13:03
S88	4	"4,107,374".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/12/07 12:43
S89	19	uniform\$3 NEAR2 entangl\$5 and (artificial NEAR5 leather) and fabric	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/12/07 16:12

**EAST Search History (Interference)**

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**12/8/2010 6:29:46 PM**

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